

Science of Signatures Advanced Studies Institute

April 18 - May 6, 2016

Los Alamos Research Park (TA-03, Bldg. 4200)

Orientation, Lectures, and Presentation - Suite 101 Viz Lab

Office Space - Suite 301, rooms 13-16

Lab Work - Suite 300

Program Overview

Week 1

- Mon., April 18* Orientation and Introductions
An Introduction to the Science of Signatures (Nan Sauer)
- Tues., April 19* TBD (Chuck Farrar)
Enabling Remote Biosurveys with Sparse Measurements (Momchilo Vuyisich)
- Wed., April 20* Radiography (Amy Larson)
The Change-of-Station Experience (Ryan Maupin)
- Thurs., April 21* The Challenges Associated with Space Debris (Jeff Bloch)
Tech Transfer (Kathleen McDonald)
- Fri., April 22* Security for Analog Computation (Danielle Kristen and Rollin Lakis)
Advocating for Your Research: A Perspective from a U.S. Senator's Staff (Katie Richardson)
Creaction Exercise (Suite 300, Kitchen)

Week 2

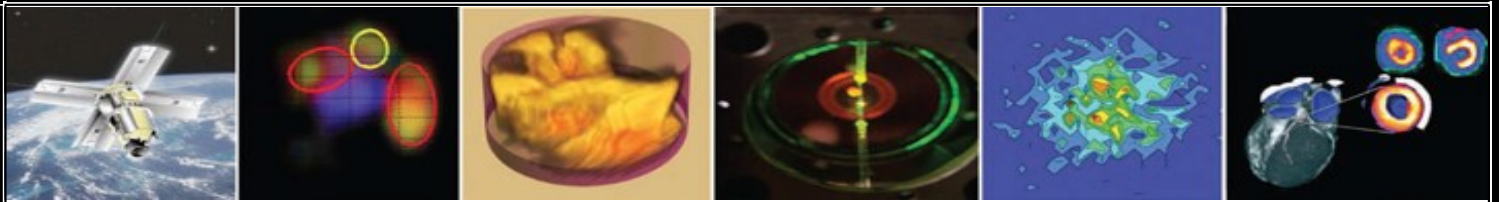
- Mon., April 25* Radiation Belts and Van Allen Probes (Geoff Reeves)
Design Thinking (Andrea Polli)
- Tues., April 26* Multi-Intelligence and Data Fusion Research at LANL (Kendra Van Buren)
Proposal Writing and Living in Northern New Mexico (Bill Priedhorsky)
- Wed., April 27* Extracting Structural Dynamics from Video (Yongchao Yang)
Collaborations (Karl Jonietz)
- Thurs., April 28* The Earth's Crust State of Stress - Why it's important and why it's a challenge to measure (David Coblenz)
How to Write Proposals (David Clark)
- Fri., April 29* How to Interact with Your Program Manager (Paul Dixon)
Telling a Story for a Popular Audience (Ben Brand, Andrew Lenchewski)

Week 3

- Mon., May 2* TBD
Public Speaking (Carrie Keating)
- Tues., May 3* History and Evolution of IEDs (Chris Ory and Chris Johansen)
TBD
- Wed., May 4* Academic Life and Getting a Faculty Job (Mike Todd)
TBD
- Thurs., May 5* Nonlinear Elasticity and Dynamic Triggering of Earthquake Slip (Paul Johnson)
Experience Commercializing LANL Technology (Duncan McBranch)
- Fri., May 6* Final Presentations, Feedback, and Improvement Discussion

Student Projects

Due Dates: Penta Charts April 28, ER Proposals May 3, Presentations May 6



Detailed Agenda

Mon., April 18

9:00-10:00	Design Thinking Warm-Up (Alessandro Cattaneo)
10:00-10:20	Introduction Presentation (Chuck Farrar)
10:20-10:30	Break
10:30-12:00	Students present personal slides
12:00-1:00	Lunch (Suite 300 Kitchen)
1:00-1:50	An Introduction to the Science of Signatures (Nan Sauer)
1:50-2:00	Break
2:00-3:30	Know Your Competition (Chuck Farrar)
3:30-5:00	Meet with mentors and begin working on projects (Suite 300) Concurrently, Ellie will show participants their office and the NSEC suite.

Tues., April 19

8:00-9:30	TBD (Chuck Farrar)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Enabling Remote Biosurveys with Sparse Measurements (Momchilo Vuyisich)
2:30-4:00	Group Collaboration (work areas)
4:00-5:00	Reconvene as a group for brainstorming session (Suite 300, Kitchen)

Wed., April 20

8:00-9:30	Radiography (Amy Larson)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	The Change-of-Station Experience (Ryan Maupin)
2:30-5:00	Group Collaboration (work areas)

Thurs., April 21

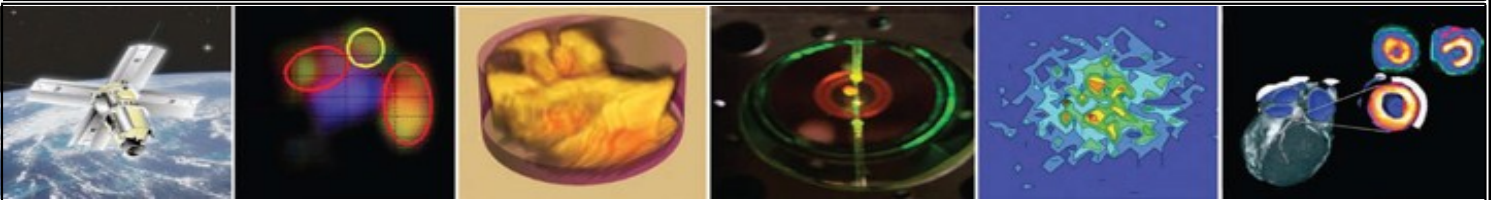
8:00-9:30	The Challenges Associated with Space Debris (Jeff Bloch)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Tech Transfer (Kathleen McDonald)
2:30-5:00	Group Collaboration (work areas)

Fri., April 22

8:00-9:30	Security for Analog Computation (Danielle Kristen and Rollin Lakis)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Advocating for Your Research: A Perspective from a U.S. Senator's Staff (Katie Richardson)
2:30-4:30	Creaction Exercise (Suite 300, Kitchen)

Mon., April 25

8:00-9:30	Radiation Belts and Van Allen Probes (Geoff Reeves)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Design Thinking (Andrea Polli)
2:30-5:00	Group Collaboration (work areas)



Tues., April 26

8:00-9:30	Multi-Intelligence and Data Fusion Research at LANL (Kendra Van Buren)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Proposal Writing and Living in Northern New Mexico (Bill Priedhorsky)
2:30-5:00	Group Collaboration (work areas)

Wed., April 27

8:00-9:30	Extracting Structural Dynamics from Video (Yongchao Yang)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Collaborations (Karl Jonietz)
2:30-5:00	Group Collaboration (work areas)

Thurs., April 28

8:00-9:30	PENTACHART DUE, 5:00 PM The Earth's Crust State of Stress - Why it's important and why it's a challenge to measure (David Coblenz)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	How to Write Proposals (David Clark)
2:30-5:00	Group Collaboration (work areas)

Fri., April 29

8:00-9:30	How to Interact with Your Program Manager (Paul Dixon)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Telling a Story for a Popular Audience (Ben Brand, Andrew Lenchewski)
2:30-5:00	Group Collaboration (work areas)

Mon., May 2

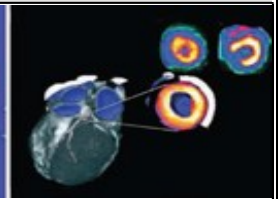
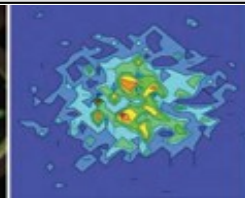
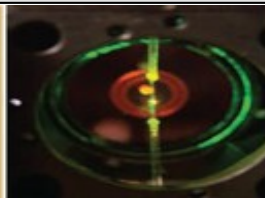
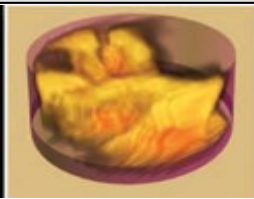
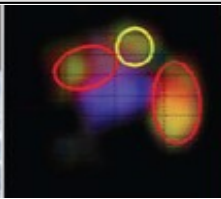
8:00-9:30	TBD
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Public Speaking (Carrie Keating)
2:30-5:00	Group Collaboration (work areas)

Tues., May 3

8:00-9:30	ER PROPOSALS DUE, 5:00 PM History and Evolution of IEDs (Chris Ory and Chris Johansen)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	TBD
2:30-5:00	Group Collaboration (work areas)

Wed., May 4

8:00-9:30	Academic Life and Getting a Faculty Job (Mike Todd)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	TBD
2:30-5:00	Group Collaboration (work areas)



Thurs., May 5

8:00-9:30	Nonlinear Elasticity and Dynamic Triggering of Earthquake Slip (Paul Johnson)
9:30-12:00	Group Collaboration (work areas)
12:00-1:00	Lunch on your own
1:00-2:30	Experience Commercializing LANL Technology (Duncan McBranch)
2:30-5:00	Group Collaboration (work areas)

Fri., May 6

8:00-12:00	PROPOSALS DUE, 8:00 AM Final Presentations, Feedback, and Improvement Discussion
12:00-1:00	Lunch (Suite 300 Kitchen)
1:00	End of event

Speakers

Alessandro Cattaneo	LANL, NSEC-EI: Engineering Institute
Chuck Farrar	LANL, NSEC-EI: Engineering Institute
Nan Sauer	LANL, ADCLES: Chemistry, Life, and Earth Sciences
Emily Schultz-Fellenz	LANL, EES-14: Earth System Observations
Momchilo Vuyisic	LANL, B-11: Bioenergy and Biome Science
Amy Larson	LANL, CCS-3: Information Sciences
Ryan Maupin	LANL, W-15: B61-12 Life Extension Program
Jeffrey Bloch	LANL, ISR-2: Space and Remote Sensing
Kathleen McDonald	LANL, FCI: Feynman Center for Innovation
Danielle Kristin	LANL, NEN-1: Safeguards Science and Technology
Rollin Lakis	LANL, NEN-1: Safeguards Science and Technology
Katie Richardson	Office of Senator Martin Heinrich
Geoff Reeves	LANL, ISR-1: Space Science and Applications
Andrea Polli	University of New Mexico
Kendra Van Buren	LANL, XCP-8: Verification and Analysis
Bill Priedhorsky	LANL, SRO: Science Resource Office
Yongchao Yang	LANL, NSEC-EI: Engineering Institute
Karl Jonietz	LANL Retiree
David Coblentz	LANL, EES-17: Geophysics
David Clark	LANL, NSEC: National Security Education Center
Paul Dixon	LANL, SNO-CNP: Civilian Nuclear Programs
Ben Brand	USA Network
Andrew Lenchewski	USA Network
Carolibe Keating	Colgate University
Chris Ory	LANL, SEO-ER: Emergency Response
Chris Johansen	LANL, SEO-ER: Emergency Response
Mike Todd	UCSD, Department of Structural Engineering
Paul Johnson	LANL, EES-17: Geophysics
Duncan McBranch	LANL, PADGS: Global Security